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ABSTRACT

The Patterns of Linkage project investigated the assumption that linkages between training institutions and employers can reduce discrepancies between training programs and employer demands, and hence increase the employability of youth. The purpose of the study was to examine and describe patterns of linkage between training institutions and private sector employers. Data were collected from 48 training programs, both Comprehensive Employment and Training Act (CETA) and non-CETA, and from 40 employers selected through an extensive process. The study concluded that linkage occurs at two levels: the institution level and the program or classroom level. Indicators of linkage at the institutional level include the background of the executive directors, the time they spend talking with local employers, and the involvement of the advisory committee in the organization. Indicators of training program linkages include the background of the classroom teachers and the time they spend talking to employers. Other findings were that CETA organizations that have strong linkages with employers tend to fund training programs at institutions with strong linkages, and that institutional-level linkages were associated with a greater tendency to please local employers in creating or deleting training programs. Institutional linkages had little effect on how the training was provided, however. Further research into linkages was recommended. (KC)

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ED226103

PATTERNS OF LINKAGE BETWEEN TRAINING INSTITUTIONS AND PRIVATE SECTOR EMPLOYERS

A Report to the
National Institute of Education

The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

September 1982

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FOREWORD

Without labor market skills, youth cannot become economically self-sufficient. The skills youth initially bring to the labor market are generally acquired through public or private training in education institutions. The effectiveness of these training institutions depends in large part on their ability to remain current with the demands of the labor market and to translate these demands into programs that provide graduates with the skills needed to obtain jobs. Youth unemployment can result when there is a discrepancy between the training youth receive and the requirements of employers. It is often asserted that training institutions are slow to respond to emerging shortages in particular fields, and slow to terminate training programs for occupations that are in surplus. It also has been argued that even when schools target on an occupation that is in great demand, they often fail both to teach the relevant skills in a realistic setting, and to instill the work habits that are essential to success on the job.

The Patterns of Linkage Project investigated the assumption that linkages between training institutions and employers can reduce discrepancies between training and employer demands, and hence increase the employability of youth. The working hypothesis of the Project was that linking employers more closely to training programs contributes to: (1) better alignment of the skills and attitudes of high-risk youth with the demands of employers, and (2) improved employment opportunities for youth.

Professor Charles Knapp of George Washington University served as a consultant for this study. His guidance and support assisted the staff in working with CETA organizations across the country. Gillian Hunter, Graduate Research Associate at the University of Wisconsin, assisted in the design of survey instruments and in conducting site visits. Appreciation is also expressed to the National Institute of Education for sponsoring the work and to Warren Simmons, who served as Project Officer.

We are grateful to the following individuals, who provided insightful critiques of the study: Henrietta Schwartz, Dean of the School of Education, San Francisco State University; Beatrice Reubens, Senior Research Specialist, Conservation of Human Resources, Columbia University; Lana Wertz, Director, Equal Opportunity, Aetna Life Casualty; and William Brooks, Director of Personnel Planning, General Motors Corporation.

The surveys discussed in this report could not have been completed without the cooperation of over two hundred people who were interviewed or provided valuable information.

Finally, The National Center for Research in Vocational Education wishes to express its appreciation to the staff members involved in this project. Michael Crowe and Deborah Coleman directed the study, with assistance from Larry Hotchkiss, Linda Lotto, Lisa Chiteji, Lynn Brant, Roger Allton, and

Bill Stevenson. The study was conducted in the Research Division of the National Center, with assistance from Associate Director John H. Bishop, who provided direction for writing interview protocols, analyzing data, and writing the report. Special thanks go to Vera Mueller, Jacque Masters, and Cathy Jones for carrying out the technical production of the report. Editing was provided by Constance Faddis of the Editorial Staff.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

CHAPTER I

INTRODUCTION

An issue of great concern in this country is how best to achieve effective collaboration among those who train workers and those who employ workers. The diversity and complexity of the nation's training systems make it difficult to plan for a more effective delivery system. A review of the history of federal efforts to promote employment and training notes that:

> ...the attempt to develop a comprehensive employment and training policy was increasing competition for federal dollars among the very organizations from whom coordination was deemed desirable. Decentralization led to diversification and as more agencies become involved, [to] more competition. The delivery system became more complex. (Riffel, 1981, p. 13)

In the debate over the proper role of various training institutions, one of the pivotal topic areas is how employers and training institutions can better work together to increase the employability of trainees. For the purposes of this study, linkage includes both formal and informal arrangements between a training institution and a private sector employer. Conditions and practices that increase the likelihood that information will be exchanged between employers and training institutions also indicate linkage.

The importance of such linkages for improving the delivery of training is exemplified by the emphasis in federal legislation placed on developing closer collaboration between private sector employers and training providers funded through the Comprehensive Employment and Training Act (CETA) or Vocational Education (P.L. 94-482). This importance is also revealed in major policy reports, such as the Carnegie Council on Policy Studies in Higher Education (1979) and the National Commission on Youth (1980), established by the Charles F. Kettering Foundation. These reports have emphasized the importance of developing closer collaboration between the public vocational training establishment and the business/industry community.

The purpose of this study was to examine and describe patterns of linkage between training institutions and private sector employers. A pattern of institutional linkage constitutes the range of activities and conditions through which institutions assess the performance requirements, work norms, and occupational needs of employers. A pattern of employer linkage depicts the range of activities and conditions through which employers seek to influence the choice of occupational training programs, curricula and training environments provided in an institutional setting. By looking at patterns of linkage rather than at singular linkage activities, overall strategies for relating employers to different kinds of training environments begin to emerge.

Because of the diversity of the training sector, the study was broad in scope. The programs studied were selected to include both CETA and non-CETA

funding sources. A variety of institutional settings (public secondary, public postsecondary, proprietary, and community-based organizations) were selected to be included in the study. This categorization of institutions reflects the legal funding and governance structure of the organization (i.e., public secondary or postsecondary, private for profit, and so forth).

In order to investigate patterns of linkage, as opposed to isolated linkage arrangements, a three-level study framework was employed. Types of linkage arrangements and related institutional and program information were examined in regard to institutional planning, training, and placement/employment activities. Institutional planning activities include selecting personnel to staff a training institution, determining which occupational programs to offer, and determining entrance criteria and other conditions for training. Training activities relate to curriculum content, instructional materials and equipment, and maintaining a learning environment. Employment/placement activities are activities oriented toward moving the graduate from training to employment.

The remainder of the report is organized into four additional chapters. Chapter 2 describes the data collection procedure for the two major research procedures--a training institution survey and an employer survey. Chapters 3 and 4 respectively present the results of the training institutions survey and the employer survey. Chapter 5 raises questions for future study.

CHAPTER II

DATA COLLECTION

The study design for the project included two major data collection procedures--a telephone survey of training institutions and a telephone survey of employers. On-site interviewing, conducted in six of the ten cities, was used to enrich and verify data collection by telephone.

Program Sample Selection

The program selection procedure was a five-step process. The first step involved identifying cities that included both CETA and non-CETA training programs, and cities in which the CETA prime sponsors and private industry councils (PICs) operated separately from each other. Separate PICs and prime sponsors were selected to make it possible to analyze the PICs, which are explicitly designated by federal legislation to promote linkage with private sector employers. A phone survey of nine U.S. Department of Labor regional PIC coordinators resulted in a list of sixty-eight such cities.

The next step in the program selection procedure was to select two occupational areas in which similar entry-level training was being provided in the variety of institutional settings being utilized in the study. The two occupational areas selected were machine trades and clerical skills. Preliminary data analysis from five cities showed that training for the machine trades is a specialized process. Therefore, data on the machine trades were not collected for institutions in the other five cities.

Through phone interviews with the prime sponsors and PIC staff, eight cities were identified that had separate PIC and prime sponsor staffs and also had either machine trades or clerical programs in the variety of institutional settings examined in the study. Two additional cities that afforded the opportunity for on-site interviewing on a repeat basis were added, making a total sample of ten cities. Using information obtained from interviews with local staff members and from a review of the institutional directories, a total of eighty-one candidate institutions were identified.

Since a particular interest of the project was hard-to-employ youth, the number of candidate institutions was further reduced to those that enrolled at least 25 percent of youth who were: (1) economically disadvantaged, (2) members of minority groups, or (3) high school dropouts or marginal achievers in high schools. Estimates of these criteria were obtained through phone interviews with the executive directors of the eighty-one candidate institutions.

The final step in the program selection process was to identify those training institutions willing to participate in the study. This process for identifying training programs resulted in a sample of forty-eight training programs in fifty-nine institutions across ten cities. The detailed information concerning the results of programs selection procedures are presented in figure 1.

Employer Selection

The institutional interview asked for the names of employers who were serving on an advisory committee to the organization, and for the names of employers who were members of an advisory committee for the machine trades and clerical occupations. From these names, forty employers were chosen and interviewed. Several schools chose not to provide these names and still others did not have an advisory committee structure. Therefore, the forty employers represent those employers who were recommended and who agreed to the interview.

FIGURE 1. Number of training programs by city, type of institution, and funding sources included in this study

		Type of Training Institution						
City	Funding Source	Public Secondary	Public Postsecondary	Proprietary Degree Awarding	Proprietary Nondegree Awarding	CBO	Comprehensive High School	Other
A	Non-CETA	1	1	1[b,c]				
	Prime Sponsor			1[b]				
	PIC							
	Non-CETA	1		1	1			1[c] (Jobs Council)
B	Prime Sponsor		1[d]					
	PIC							
C	Non-CETA	1[g]	1[g]					
	Prime Sponsor							1[d,f,g] (CETA Skills Center)
	PIC							
D	Non-CETA		1		1	1		
	Prime Sponsor					1[f]		
	PIC				1[f]	1[f]		
E	Non-CETA	1[e]	1[e]	1[b]	1	1		
	Prime Sponsor			1[b]		1		
	PIC is Advisory							
F	Non-CETA		1					
	Prime Sponsor				1	3	1	
	PIC							
G	Non-CETA	2	1		1		2	
	Prime Sponsor	1						
	PIC							
H	Non-CETA		1					
	Prime Sponsor							
	PIC							
I	Non-CETA	1	1		2	1		
	Prime Sponsor							
	PIC							
J	Non-CETA	1	1		1			
	Prime Sponsor							
	PIC							

NOTES: [a]Values in cells represent the number of training programs for which there is some information.

[b]Different programs, but in same institutions.

[c]Although the PIC supports about one-third of the trainees, for purposes of this analysis, the program was classified as non-CETA funded since there was no special consideration given PIC-sponsored trainees.

[d]This program has trainees sponsored by Prime Sponsor and PIC.

[e]No training program information for this program.

[f]No executive director information for this program.

[g]Machine trades training program; all others are clerical training programs.

The Selection of Respondents

A telephone interview was selected as the primary data collection strategy. In addition, a small number of follow-up, on-site interviews were conducted. The on-site interviews served to verify the information obtained from the phone interviews and provided the opportunity for in-depth probing of issues related to institutional linkage.

According to the conceptual approach of looking at linkage as communication brought to bear on three functions (i.e., institutional planning, training, and placement/employment), phone interviews were conducted with the executive director and with the following personnel of each institution: (1) admissions or intake officers, (2) trainers, and (3) placement officers. If an institution offered a separate course or set of activities designed to help trainees get a job, the instructor of this activitity was also interviewed. In some institutions, each of these functions was performed by a different individual; in other institutions, one individual served in more than one role. Data collected from an individual who performed several roles were counted each time data for that role was considered.

The executive director of the institution was interviewed first. At the end of that first interview, the executive director was asked to recommend a staff member in each of the above noted functions (admissions, and so forth) who could participate in the interviewing process.

Instrument Development

Selecting an operational definition for linkage was the initial task in the development of the telephone interview questionnaire. It was determined that a definition that incorporated a variety of perspectives should be used. As a result, the final definition viewed linkage as communication of knowledge and institutional response to the demand for workers, as indicated by the labor supply and demand model. Linkage was viewed as a means through which communication occurs about the hiring needs, practices, and standards of employers, and the capabilities and capacities of training programs.

Linkage takes place at both institutional and program levels. Information and experience acquired through linkage is used in decision making for three functional areas: (1) institutional planning, (2) training, and (3) employment/placement activities. Institutional planning includes determining occupational areas for training, selecting training personnel, establishing criteria for admissions, and establishing overall policy. Planning for training includes determining specific skills to be taught, developing training materials, delivering training, and providing a training environment for learning the job. Employment or placement includes all activities designed to move the student from school to paid employment.

As a second step, an interview questionnaire of approximately 100 items based on each of the three perspectives was prepared. The items were classified according to which person in the training institution could best re-

spond to the item, the content of the response, how the item would be evaluated by respondents in different institutions, and what other types of information would be related to the item. A preliminary interview questionnaire was developed and field-tested in Indianapolis, Indiana and Columbus, Ohio. Based on these field tests, a final questionnaire was constructed. The instruments used in the study appear in a separate document, Technical Appendices.

Because of the diversity among training institutions and programs, it should be noted that similar responses across institutions may require different interpretations according to local contexts.

The employer interview was developed to obtain the employer perspective on those questions from the institutional interview that asked how employers contribute to activities both at the institutional level and at the program level. In this way, the employer survey could be used to validate the answers and perceptions of training institution personnel, as well as provide interpretations of the relative significance of these activities as seen from an employer point of view.

CHAPTER III

RESULTS OF INSTITUTIONAL SURVEY

A total of forty-eight training programs in fifty-nine institutions were included in the institutional survey. The results of the survey, along with the follow-up information obtained in the on-site interviews are summarized in this chapter. The first section describes the participating institutions included in the sample. The description is framed in terms of the major types of institutions (public secondary, public postsecondary, and so forth) included in the survey and variations within categories in enrollment program offerings and staff size. A discussion of the use of advisory committees follows. A third section presents the types of linkage arrangements developed between the various types of training institutions and the business/industry community. Fourth, relationships among measures of linkage and characteristics of the programs are presented. Chapter 4 will present data from the telephone survey of forty employers who served as advisory committee members to institutions in the study.

Institutional Context

Institutional Capacity

Figure 2 displays the fifty-nine institutions categorized by legal funding and governance structure (i.e., public secondary or postsecondary, private for profit, and so forth). These broad categories differ in size, purpose of the organization, and scope of program offerings. The category of secondary institutions includes vocational high schools, area vocational-technical schools, and adult skill centers that are governed by local boards of education.

Figure 2. Number of institutions surveyed

Type of Institution	Number
Prime Sponsors	7
Private Industry Councils (PICs)	6
Public Secondary	8
Public Postsecondary	11
Proprietary	11
Community-based Organization (CBOs)	11
Comprehensive High Schools	3
Others	2
Total	59

The sizes of the institutions in the sample, as measured by the number of full-time professional staff and the number of occupational courses are displayed in table 1. For all classifications of institutions, with the exception of PICs, the range in the number of full-time staff and in the number of occupational programs is considerable. Considering the more targeted and limited mission of community-based organizations (CBOs) and proprietary schools, it is not surprising that these eighteen institutions offer the fewest programs. In reviewing the sizes of the public secondary and postsecondary schools, some caution is in order. The very small institutions tend to be institutes or divisions operating somewhat independently of the parent organizations but whose staff are on the payroll of the larger organization.

TABLE 1

NUMBER OF FULL-TIME STAFF AND OCCUPATIONAL PROGRAMS BY TYPE OF INSTITUTION

Type of Institution	N	Number of Full-time Staff in Institutions		Number of Occupational Programs Supported or Offered by Institutions	
		Range	Median	Range	Median
Prime Sponsors	7	16-240	59	10-32	14
PICs	6	2-25	4.5	3-20	11.5
Public Secondary	8	5-100	60	10-25	16.5
Public Postsecondary	11	3-560	200	1-90	44
Proprietary	10	3-75	15	1-13	8
CBOs	8	16-100	30	3-12	5
Comprehensive High Schools	3	11-88	39	14-20	17

N = Number of institutions for which this data is available

Table 2, which shows the number of trainees by sex, ethnic group, and age, further demonstrates the differences in enrollment and demographic characteristics of clientele for institutions within the same classification. Since institutions were selected on the basis of their having at least 25 percent disadvantaged students and 25 percent under the age of twenty-five, the variation across institutions was constrained.

Figure 3 shows the numbers of each type of institution that receive CETA funds for training. CETA-funded training programs include programs selected by the prime sponsor (Title VII) and/or the PIC (Title II B). Information on whether institutions receive funding under other CETA Titles was not collected. In many cases, the prime sponsor and the PIC support either the same training program or similar programs in the same institutions. Often, the prime sponsor or PIC merely purchases slots (i.e., pays the tuition for CETA-eligible persons to attend class). One-third of the total sample of programs studied reside in institutions receiving CETA Title VII and/or Title II B monies. Half of the CETA-funded programs are in CBOs and a third are in

TABLE 2

DEMOGRAPHICS OF CURRENT TRAINING CLASS FOR EACH INSTITUTION
BY TYPE OF INSTITUTION

Type of Training Institutions	Total Number of Trainees	Percent of Trainees							
		Sex		Ethnicity				Age	
		Male	Female	W	B	H	O	Under 25	Over 25
Public Secondary:									
A	18	0	100	50	50	0	0	100	0
B	100	10	90	15	80	5	0	25	75
C[c]	40	80	20	70	30	0	0	100	0
D[d]	559	85	15	71	29	0	0	100	0
E[d]	1,035			60	40	0	0	100	0
F[d]	477	50	50	50	50	0	0	100	0
G[d]	MD								MD
Public Postsecondary:									
A	30	10	90	60	40	0	0	50	50
B[b]	21	4	96	4	96	0	0	80	20
C[c]	36	97	3	94	3	3	0	70	30
D[d]	285-300	DK					DK	100	0
E[d]									
F[d]	1,919	87	13						
G[d]	8,200	45	55	75	25	0	0	0	100
H[d]	MD								MD
I	MD								MD
Proprietary:									
A[b]	35	6	94	6	82	12	0	60	40
B	30	0	100	70	20	0	10	90	10
C	19	5	95	37	58	5	0	95	5
D	15	13	87	7	13	33	47	100	0
E[b]	100	5	95	67	20	7	6	40	60
F[d]	350	25	75	50	50	0	0	95	5
G[d]	215	20	80	DK			DK	60	40
H[d]	76	19	81	87	12	1	0	75	25
I[d]	MD								MD
CBOs :									
A[b]	19	11	89	21	37	16	26	47	53
B	15	7	93	7	79	7	7	80	20
C[bc]	22	91	9	90	10	0	0	50	50
D[b]	76	32	68	17	9	73	1	80	20
E	25	0	100	68	32	0	0	80	20
F[b]	50	30	70	14	28	0	58	100	0
G[d]	MD								MD
H[d]	266	MD							MD
I[d]	70-80	75	25	10	80	10	0	50	50
J[d]	MD								MD
Comprehensive High Schools:									
A[d]	250	40	60	30	50	10	10	100	0
B[d]	1,200	58	42	70	30	0	0	100	0
C[d]	1,441	49	51	0	0	0	0	100	0

a = Data for five classes are missing
b = Represents CETA-funded programs
c = Machine trades occupational programs
d = Clerical/secretarial occupational programs

proprietary schools. The relatively high use of CBOs is consistent with their purpose and role in the community as explained by Riffel (1981). That there are only two CETA-funded programs in the public secondary and postsecondary institutions reflects a lower utilization of these institutions than is found in most situations. In considering this distribution, it should be noted that the programs studied are predominantly clerical and are therefore easily set up in a CBO or proprietary school setting.

Figure 3. Number of training programs by type of institution and funding source

	Non-CETA	CETA	Total
Public Secondary	7	1	8
Comprehensive High School	3		3
Public Postsecondary	10	1	11
Proprietary	10	3	13
CBOs	4	6	10
Others	2	1	3
Total	36	12	48

Private Sector Experience of Institutional Personnel

Prior private sector work experience of personnel who direct the institution or who are trainers, admissions staff, or placement personnel is thought to be a facilitator of linkage. Tables 3, 4 and 5 show the percentage of executive directors, trainers, admissions personnel, and placement staff who held related jobs in the private sector before taking their current positions. Fifty percent of the directors of proprietary schools and of CBOs previously managed a business or had been a personnel manager. On the other hand, 100 percent of the instructional staff in public secondary schools, CBOs, and comprehensive high schools had private sector work experience in the field in which they are teaching. Over half (57 percent) of admissions staff from CBOs had private sector work experience, whereas 75 percent of the staff on public postsecondary schools had this experience. A somewhat higher

TABLE 3

EXECUTIVE DIRECTORS' PRIOR PRIVATE SECTOR WORK EXPERIENCE
BY TYPE OF INSTITUTION

Type of Institution	N	Percent of Executive Directors Who Managed Businesses or Had Been Personnel Managers
Prime Sponsors	7	14%
PICs	6	33%
Public Secondary	11	36%
Proprietary	10	50%
CBOs	8	50%
Comprehensive High Schools	3	0%
TOTAL	45	36%

N = Number of Executive Directors

percentage of placement staff of public secondary schools had private sector experience than had comparable staff in other types of institutions.

TABLE 4

PRIOR PRIVATE SECTOR WORK EXPERIENCE OF PROGRAM PERSONNEL BY TYPE OF TRAINING INSTITUTION

Type of Institution	N	Percent Trainers with Supervision or Occupational Experience	N	Percent Intake or Admissions Persons with Personnel or Private Sector Job Experience	N	Percent Placement Persons with Personnel or Other Private Sector Job Experience	Total Percent of Persons with Private Sector Work Experience
Public Secondary	8	100%	6	67%	5	80%	84%
Public Postsecondary	9	89%	8	75%	7	71%	79%
Proprietary	13	77%	9	78%	9	78%	77%
CBOs	8	100%	7	57%	7	71%	77%
Comprehensive High Schools	3	100%	0	0	1	100%	100%
TOTAL	41	90%	40	70%	29	76%	

Table 5 presents this same data for institutions grouped as CETA-funded and non-CETA-funded. For trainers, admission staff, and placement persons, a higher percentage of staff from CETA-funded organizations had prior private sector work experience.

TABLE 5

PRIOR PRIVATE SECTOR WORK EXPERIENCE OF TRAINING INSTITUTION PERSONNEL BY CETA-FUNDED AND NON-CETA-FUNDED PROGRAMS

Funding Source	N	Percent Trainers with Supervision or Occupational Experience	N[a]	Percent Intake or Admission Persons with Personnel or Private Sector Job Experience	N[a]	Percent Placement Persons with Personnel or Other Private Sector Job Experience	Total Percent of Persons with Private Sector Work Experience
CETA-funded	12	83%	9	89%	9	67%	80%
Non-CETA-funded	36	75%	23	52%	28	57%	63%
TOTAL	48	77%	32	63%	37	59%	

N = Number of occupational programs

[a] = Number of occupational programs reporting data

Advisory Committees

Including private sector employers on the governing boards and/or advisory committees of education and training institutions is one of the most common mechanisms for linking with the private sector (see tables 6 and 7). Advisory committees may be established on an institutional level to assist in planning and the decision making involved in institutional planning. They may also be used at the program level to focus on specific occupational program questions. As shown in table 6, 100 percent of the prime sponsors and PICs and a high percentage of the public secondary (88 percent) and postsecondary institutions (91 percent) have formal advisory committees. The list of titles for subcommittees shows that these committees serve institutional functions such as assistance with evaluation, planning, or budgeting, as well as occupational planning.

TABLE 6

ADVISORY COMMITTEES FOR INSTITUTIONS

Type of Institution	N	Percent Having Advisory Committees or Councils	Percent Having Subcommittees	Number of Subcommittees		Titles of Subcommittees
				Range	Median	
Prime Sponsors	7	100%	71%	1-6	3	Review Title IV Planning (2) Youth Employment Evaluation Oversight Education Program Evaluation Service Providers Budget Youth Redesign Planning
PICs	6	100%	100%	1-4	2.5	Project Review Research Development Minority Employment Membership Employment Generation Employment & Training Computer Programming Machine Trades Operating Committee Executive Committee Clerical Committee
Public Secondary	8	88%	13%	10	10	Each Program
Public Postsecondary	11	91%	36%	3-75	5	Graphics Dental Assistants Business Education Clerical and Machine Trades Committees
Proprietary	10	60%	40%	2-5	3.5	Legal Secretary Medical Secretary Executive Secretary Finance Co-op Curriculum Capital Outlay Restaurant Management
CBOs	8	75%	50%	2-5	3.5	Policy Staff Development Executive Operations Placement Planning New Curriculum Skill Training Adult Basic Education Board of Trustees Project Advisory Board Advisory Board Clerical Adult Vocational Business Education
Comprehensive High Schools	3	33%	33%	1	1	Ad Hoc Committees

N = Number of Institutions

Table 7 presents the percent of institutions that have an advisory committee for the clerical or machine trades training programs. This table again points out the variation in practice among schools within a single classification. Occupationally related advisory committees are least used by the proprietary schools (40 percent) and most used by PICs (83 percent) and public postsecondary schools (82 percent).

TABLE 7

ADVISORY OR PLANNING COMMITTEES
FOR CLERICAL OR MACHINE TRADES OCCUPATIONS

Type of Institutions	N	Percent of Institutions Having a Specific Planning Committee for the Occupational Programs of Clerical or Machine Trades
Prime Sponsors	7	60%
PICs	6	83%
Public Secondary	8	63%
Public Postsecondary	11	82%
Proprietary	10	40%
CBOs	8	75%
Comprehensive High Schools	3	67%

N = Number of institutions

The amount of time that training institution staff and advisory comittee members spend interacting with each other is an indicator of the intensity of communication, and hence of linkage. Table 8 displays the executive directors' report of the time that committee members spent in advisory committee meetings. The data indicate that advisory committee members for prime sponsors and PICs spent more time than the advisory committee members of other training institutions. The advisory committee members of public secondary schools and proprietary schools spent the least amount of time in meetings.

Advisory committee meetings represent only a portion of the contact between institutional staff and the private sector. Table 9 presents data on the time spent by the executive directors during the previous five working days in conversation with employers--both those on the advisory committees and those not on the committee.

The time spent in conversation with employers on the advisory committee averaged 5.1 hours for CBO directors, 8.1 hours for PIC directors, 4.8 hours for proprietary school directors, and less than one hour for the directors of the other institutions. The time spent conversing with employers not on the advisory committee averaged 3.4 hours for the secondary school directors, 2.9 hours for the postsecondary school directors, 4.6 hours for PIC directors, and less than 1.4 hours for the directors of CBOs, CETA prime sponsors, and proprietary schools. Obviously, in the CBOs, PICS, and proprietary schools, advisory committees are a very important part of the institution. The majority of executive directors who reported no time spent contacting employers

indicated that this was not part of their job, and that other individuals in the organization were responsible for this activity.

TABLE 8

TIME SPENT IN ADVISORY COMMITTEE MEETINGS

Type of Institution	N	Percent of Institutions That Spend Time in Advisory Committee Meetings				
		Average Hours per Month				
		Less than 1 hour	1 to 2.9 hours	3 to 4.9 hours	5 or more hours	Did not know
Prime Sponsors	8	0	17%	33%	33%	17%
PICs	7	0	14%	29%	14%	43%
Public Secondary	7	57%	43%	0	0	0
Public Postsecondary	10	20%	20%	20%	0	40%
Proprietary	6	35%	0	17%	0	50%
CBOs	9	11%	22%	11%	11%	45%
Comprehensive High Schools	3	67%	33%	0	0	0

N = Number of institutions having advisory panels

TABLE 9

EXECUTIVE DIRECTORS' CONTACT WITH EMPLOYERS FOR LAST FIVE DAYS BY TYPE OF INSTITUTION

Type of Institution	N	Time Contacting Advisory Panel Members					Time Contacting Non-advisory Panel Members				
		Number of Hours during Last 5 Days					Number of Hours during Last 5 Days				
		0	1-4	5-8	9-12	13+	0	1-4	5-8	9-12	13+
Prime Sponsors	8	63%	37%				50%	37%	13%		
PICs	7		29%		42%	29%		57%	29%		14%
Public Secondary	7	86%	14%				57%	29%			14%
Public Postsecondary	10	70%	30%				30%	50%		20%	
Proprietary*	10	60%				30%	33%	67%			
CBOs	8	63%	12%			25%	50%	50%			
Comprehensive High Schools	3										

N = Number of executive directors

* Percentages do not add to 100 due to missing data

Institutional Flexibility in Program Offerings

Another indicator of an institution's linkage to the labor market is its ability to add or discontinue occupational training when the market demands. The assumption is that because occupations and their requirements are constantly changing, institutions that add or discontinue training are more responsive to the labor market than are institutions that do not adjust their training programs. Data was, therefore, collected on (1) the number of occupational programs added or discontinued during FY 81 and (2) the reasons for the discontinuations.

The hypothesis was that prime sponsors and PICs would be more likely than other institutions to add or drop programs. The basis for this hypothesis was that these institutions are brokers of training provided by others and, consequently, have no long-term commitments to staff and no buildings and equipment to maintain. The data presented in table 10 clearly support this hypothesis. Not only were the prime sponsors and especially the PICs more likely to add or drop programs, they were also more likely to attribute drop decisions to market-related factors, such as lack of placements or an absence of employer requests.

TABLE 10

AVERAGE PERCENT OF PROGRAM CHANGES IN RESPONSE TO LABOR MARKET CONDITIONS

Type of Institution	Number of Occupational Programs	Percent of Programs Result of Employee Request	Average Percent of Programs Employers Promised to Hire	Average Percent of Programs Added	Average Percent of Programs Deleted
Prime Sponsors (7)	129	12%	4%	25%	6%
PICs (6)	66	45%	9%	54%	36%
Public Secondary (Vocational) (8)	105	9%	2%	1%	12%
Comprehensive High Schools (3)	34	11%	0	10%	5%
Public Post-secondary (11)	484	11%	1%	21%	4%
Proprietary (11)	69	22%	6%	16%	3%
CBOs (10)	26	42%	42%	18%	28%

Most PICs in the sample had only recently come into existence and had rapidly growing budgets and staff, so their propensity to add new programs is no surprise. The large number of discontinuations (36 percent over a two-year period), however, is quite significant and reflects both the flexibility that comes from being a broker and the unique philosophical orientation of these institutions.

The CBOs and prime sponsors seem to be the next most flexible institutions. New programs were 25 percent of the prime sponsors' offering and 18 percent of the CBOs' offerings. In the previous two-year period, 28 percent of the CBOs' programs had been discontinued.

PICs and CBOs are more likely to offer training programs in response to requests by employers. In fact, two PICs and one CBO indicated that all their programs resulted from employer requests. CBOs had lined up promises to hire some of their graduates for 42 percent of their training programs. In the other training institutions this practice was quite uncommon, with

none of the categories of training institutions having obtained hiring commitments in advance for more than 10 percent of their programs. The explanation given by some respondents was that their training programs produced such outstanding graduates that a promise to hire was not needed.

Linkage Functions

This section presents the types of linkage arrangements developed between the various types of training institutions and private sector employers, along with related institutional and program information. The information is discussed under three subtopics--student selection, training, and placement. These three functional areas are essential to delivering training, but are often somewhat independent of each other. Employers may contact the institution and communicate preferences at any of these points.

Selection and Admissions

Those activities conducted by training institutions before actual training takes place represent one of the areas where linkage with the private sector can prove beneficial. Examples of these activities include: (1) assisting in determining the selection criteria for students, (2) providing input as to the selection requirements for instructors, and (3) providing information on labor market needs. In this survey, concentration was extended to one of these activities--the screening criteria employed by the various types of institutions.

The processes by which applicants are admitted into a training program vary in complexity and selectivity across types of institutions. This variability is suggested by the data presented in table 11. At one extreme is the process by which students are admitted to high school vocational programs. In the two sample high schools, students do not have to pass any tests or achieve a particular grade point average.

TABLE 11

SCREENING CRITERIA
BY TYPE OF INSTITUTION

Type of Institution	N	Percent of Programs Using Screening Criteria of:						
		High School Diploma or G.E.D.	Work History	Grade Average	Standardized Test	Customized Test	Interview for Interest	Interview for Rating
Prime Sponsors and PICs	7	29	0	0	86	14	86	72
Public Secondary	5	0	0	20	0	20	80	20
Public Postsecondary	10	50	10	10	50	10	70	40
Proprietary	6	83	0	17	67	33	83	17
CBOs	4	25	50	0	50	25	75	21
Comprehensive High Schools	1	0	0	0	10	0	0	0

N = Number of occupational programs

Somewhat more complex is the system used by a CETA Skill Center. Prospective students are first exposed to an information room, where they are informed about various occupations and placement opportunities. The students are then tested to determine their aptitude for the occupations for which training programs are available. In addition, they are interviewed to determine their interest in and understanding of the various occupational areas. Based upon the test and interviews, the applicants are placed for "hands-on experience" for several days in each of the three areas that emerge as most appropriate. Instructors evaluate these experiences and, if no problems appear during the "hands-on" period, the student is allowed to select any one of the three training programs. In the rare instance that none of the three occupations seems appropriate, the prospective students are recycled through the information room.

The selection process typical of the public and private postsecondary institutions in the sample is similarly complex but considerably more selective. The most common pattern uses a combination of high school diploma or G.E.D., standardized tests, and interviews. In several cases, provisions for waiver of the high school diploma are granted if scores on standardized tests are high enough (usually about the sixth grade level).

The most involved selection process is that used by some of the CETA prime sponsors. Most of their candidate trainees go through multiple stages of screening. For those people who enter the process by approaching CETA first, the prime sponsors' intake unit is the first step of the process. The applicants are tested and interviewed to determine their categorical eligibility for CETA services, their occupational interests and aptitudes, and their ability to handle various occupational curricula. Those determined to be eligible are generally referred to a vendor institution, where the student may be screened a second time for admission to that institution, and even a third time for admission to a particular occupational area.

For other CETA trainees, the vendor is the first point of contact in the application process. In many cities, vendors recruit CETA-eligible trainees by placing ads in the paper. If the vendor's screening procedures indicate a possible match with an upcoming training program, the individual is referred to CETA for certification of eligibility.

In summary, all institutions use some type of screening criteria, usually a combination of educational background, test scores, and interviews. However, it appears that only in a minority of cases are these criteria actually used to deny students access to training. Most often they are merely a tool for placement and counseling for vocational choice.

Training

Opportunities also exist to create linkages directed toward shaping the actual content of training programs. Moreover, the private sector can provide assistance in exploring considerations such as: (1) the advantages and disadvantages of various training sites, or (2) the use of resource persons in teaching. In this section, information about these types of linkages is presented, along with associated institutional and program data.

Trainers were asked to describe employer participation in the design of the curriculum. Table 12 displays this information. Of the forty respondents to this item, ten do not know whether employers participate in the design of the curriculum. Seventy-one percent of public secondary and postsecondary schools and all three of the comprehensive high schools indicate that there is some employer involvement. While fewer proprietary schools report involvement in curriculum development, this percentage is over 50 percent. When comparing programs by source of funding, there is no difference between the CETA-funded programs and the non-CETA-funded programs.

TABLE 12

EMPLOYERS' PARTICIPATION IN CURRICULUM DESIGN
BY TYPE OF INSTITUTION

Type of Institution	N	Percent of Respondents Who Did Not Know If Employers Participated	Percent of Programs Where Employers Did Not Participate	Percent of Programs Where Employers Did Participate	Percent of Employers Who:*				
					Donate Hardware	Provide Training Materials	Recommend Occupational Curriculum	Recommend Firm Curriculum	Evaluate Program
Public Secondary	7	0%	29%	71%		29%	43%	14%	29%
Public Postsecondary	7	14%	43%	71%	29%	71%	57%	86%	100%
Proprietary	13	25%	23%	54%	15%	23%	40%	54%	46%
CBOs	10	0%	30%	60%	60%	40%	50%	60%	10%
Comprehensive High Schools	3	0%	0%	100%	33%	100%	67%	100%	100%

N = Number of occupational programs

* Percent based on number of employers that did participate.

EMPLOYERS' PARTICIPATION IN CURRICULUM DESIGN
BY CETA-FUNDED AND NON-CETA-FUNDED PROGRAMS

Funding Source	N	Percent of Respondents Who Did Not Know If Employers Participated	Percent of Programs Where Employers Did Not Participate	Percent of Programs Where Employers Did Participate	Percent of Employers Who:*				
					Donate Hardware	Provide Training Materials	Recommend Occupational Curriculum	Recommend Firm Curriculum	Evaluate Program
CETA-funded	12	8%	33%	75%	50%	17%	42%	67%	25%
Non-CETA-funded	24	13%	25%	79%	17%	50%	63%	54%	63%

N = Number of occupational programs

* Percent based on number of employers that did participate.

There appear to be several basic ways in which employers contribute to training programs. Seventy-one percent of public postsecondary schools receive training materials and 86 percent receive recommendations from employers for tailoring their training to specific employers. All seven public postsecondary institutions that have employer involvement receive program evaluations. Ten percent of the ten CBOs have employer evaluation of the curriculum and 60 percent receive donated hardware from employers.

Learning technical skills and related work habits may enable a person to be hired into a job; however, employers say that more general habits of punctuality, responsibility, and cooperation enable the person to keep the job. Therefore, an indicator of linkage between a training program and employers is the extent to which the environment in which training occurs communicates the policies, practices, and expectations of the workplace.

Tables 13 and 14 present data on one way that trainers try to induce more appropriate workplace behavior: dropping students for absenteeism, poor performance, or disruptive behavior. Eighty-nine percent of the public postsecondary schools and over half of public secondary, proprietary, and CBO organizations claim to drop students because of absenteeism. In these schools a certain number of tardy arrivals equals absenteeism. Except for public postsecondary institutions, it does not appear that one class of institution is more likely than another to discipline students for absenteeism. Rather, differences in practice occur within groups. A classification of institutions by CETA funding and non-CETA funding shows that 80 percent of the CETA-funded programs report having dropped students for absenteeism.

TABLE 13

DROPPING STUDENTS FOR ABSENTEEISM
BY TYPE OF INSTITUTION

Type of Institution	N	Percent of Programs That Drop Students Because of Absenteeism	Percent Not Dropped	Percent Don't Know
Public Secondary*	8	58%	27%	14%
Public Postsecondary	9	89%	0%	11%
Proprietary	13	58%	33%	8%
CBOs	10	55%	33%	11%

N = Number of occupational programs

* Public Secondary Includes Comprehensive High Schools

DROPPING STUDENTS FOR ABSENTEEISM
BY CETA-FUNDED AND NON-CETA-FUNDED PROGRAMS

Funding Source	N	Percent of Programs That Drop Students Because of Absenteeism	Percent Not Dropped	Percent Don't Know
CETA-funded	10	80%	10%	10%
Non-CETA-funded	30	52%	33%	15%

N = Number of occupational programs

As with discipline for absenteeism, postsecondary institutions appear to demand stricter adherence to both literacy requirements and the attitudinal requirements of the job (see table 14). Unlike the data in table 13, which deal with an institutional practice of enforcing attendance, data in table 14 specifically deal with at the action of the instructor. Focusing on instructor behavior, there is little difference between CETA-funded and non-CETA-funded schools.

Other major aspects of training are the length of time students spend in the program and the amount of emphasis that the institution places on basic skill training. In this study, length of training time was viewed as a curriculum concern with implications for desired levels of competence, breadth of skill development, and requirements for entry-level performance.

TABLE 14

INSTRUCTOR RECOMMENDATIONS TO DISCONTINUE TRAINING
BY TYPE OF INSTITUTION

Type of Institution	N	Percent of Programs Where Instructors Could Recommend Training Be Discontinued for Trainees	Reasons for Discontinuation
Public Secondary	8	50%	Absenteeism Poor attitude Dress and appearance Not able to handle the math
Public Postsecondary	8	88%	Low reading skills Absenteeism Do not have the required aptitude Do not have positive attitude
Proprietary	12	50%	Lack basic skills Disruptive behavior Absenteeism
CBOs	8	63%	Absenteeism Poor academic performance Not showing growth Do not have positive attitude
Comprehensive High Schools			

N = Number of occupational programs

INSTRUCTOR RECOMMENDATIONS TO DISCONTINUE TRAINING
BY CETA-FUNDED AND NON-CETA-FUNDED PROGRAMS

Funding Source	N	Percent of Programs Where Instructors Could Recommend Training Be Discontinued for Trainees	Reasons for Discontinuation
CETA-funded	10	60%	Absenteeism (4) Disruptive behavior Do not have positive attitude Not showing growth
Non-CETA-funded	23	64%	Dress and appearance Not able to handle math Low reading skills Absenteeism Poor academic performance Do not have positive attitude

N = Number of occupational programs

As illustrated in table 15, there are differences both across types of institutions and by funding source in regard to length of training time. By far, the longest training time occurs in public secondary schools. However, in these schools, only half or less of the day is spent in vocational coursework. These programs provide a greater period of time for basic skills related instruction. Instruction in basic skills is part of the curriculum for over 15 percent of the institutions in each classification.

TABLE 15

TRAINING TIME
BY TYPE OF TRAINING INSTITUTION

Type of Institution	N	Training Time in Weeks	
		Range	Median
Public Secondary	7	20-156	72
Public Postsecondary	8	22-104	29.5
Proprietary	13	16- 52	26
CBOs	11	9- 72	23
Comprehensive High Schools	3	36- 40	38

N = Number of occupational programs

TRAINING TIME
BY CETA-FUNDED AND NON-CETA-FUNDED PROGRAMS

Funding Source	N	Training Time in Weeks	
		Range	Median
CETA-funded	12	9- 40	23
Non-CETA-funded	29	12-156	36

N = Number of occupational programs

The following series of excerpts from the on-site visits reflects the range of practices regarding length of training.

- Each class is in session for nine weeks. All work is done in a classroom setting with work stations equipped with IBM Selectric typewriters and transcription machines for each student. The program does not include activities where students work or train at an employer's office. Class time is spent both on basic skills, such as business math, and on typing speed and accuracy.
- In a nine-month program, when students cannot keep up or achieve, they "drop down" to the level at which they can achieve. The range in skills taught includes typing at 60-80 words per minute, shorthand, and operating a PBX switchboard. Word processing is also taught.
- In today's market, persons entering the secretarial field want to earn more money. However, to earn more, workers need to move from entry level into more complicated jobs that involve

filing, billing, recordkeeping, and other skills. In line with this trend, the school has moved to a nine-month program with emphasis on diversification of skills. The graduate who can specialize in a set of skills can fit into the different job openings of the corporation and can demand higher pay.

- Given the range of skill levels, personal habits, and attitudes possessed by the students who enter the Center, completion of a program will take from one to two years. Included in the work for some students is coursework in budgeting, paying bills, using checking accounts, and family and personal communciation. Counseling for family and personal problems of the student is also available.

- For approximately 50 percent of the students, entrance into the occupational curriculum follows a year of developmental or remedial coursework. For these students, training will take two years.

TABLE 16

BASIC SKILLS TRAINING
BY TYPE OF INSTITUTION

Type of Institution	N	Percent Offering Basic Skills Training
Public Secondary	7	100%
Public Postsecondary	9	89%
Proprietary	12	83%
CBOs	9	78%
Comprehensive High Schools	3	100%

N = Number of occupational programs

BASIC SKILLS TRAINING
BY CETA-FUNDED AND NON-CETA-FUNDED PROGRAMS

Funding Source	N	Percent Offering Basic Skills Training
CETA-funded	12	75%
Non-CETA-funded	29	86%

N = Number of occupational programs

How do the different types of institutions determine when a trainee is job ready? Data related to that question are summarized in table 17. All training programs use a combination of the criteria in determining the job readiness of their students. The relative emphasis given different criteria varies. For example, 86 percent of public secondary school personnel take into consideration the trainer's judgement, while this judgement is used by only 13 percent of public postsecondary school personnel. Completing a certain number of hours of training is least important in proprietary schools.

TABLE 17

CRITERIA TO DETERMINE IF TRAINEE IS JOB-READY
BY TYPE OF INSTITUTION

Type of Institution	N	Percent Indicating--				
		Completion of X Hours of Training	Passing Written Exam	Passing Practical Exam	Judgement Made by Trainer	Grades and/or Certificate
Public Secondary	7	43%	43%	57%	86%	43%
Public Postsecondary	8	38%	63%	38%	13%	38%
Proprietary	12	17%	58%	67%	25%	25%
CBOs	9	44%	44%	56%	44%	11%
Comprehensive High Schools	3	67%	67%	67%	100%	100%

N = Number of occupational programs

TABLE 18

CRITERIA TO DETERMINE IF TRAINEE IS JOB-READY
BY CETA-FUNDED AND NON-CETA-FUNDED PROGRAMS

Funding Source	N	Percent Indicating--				
		Completion of X Hours of Training	Passing Written Exam	Passing Practical Exam	Judgement Made by Trainer	Grades and/or Certificate
CETA-funded	12	25%	50%	83%	42%	8%
Non-CETA-funded	24	46%	63%	46%	54%	54%

N = Number of occupational programs

Both job skills and work habits are essential for getting and keeping a job. However, the relative emphasis placed on these technical skills versus generalized work habits may vary according to the perception trainers hold regarding the needs of their students and the demands of employers in their community. The emphasis placed on one over the other has implications for criteria used in selecting students, for the allocation of time in the classroom, and for standards used for determining job readiness. Tables 19 and 20 present responses on whether trainers and placement persons believe that employers place greater emphasis on technical skills or on work habits. The category "both" was added to the analysis because, even though interviews presented a choice of one or the other, a significant number of respondents insisted that technical skills and work habits are equally necessary. Trainers from two of the types of institutions that serve predominately older students (i.e., postsecondary schools and CBOs) place greater emphasis on technical skills. Trainers in public secondary institutions stress work habits.

TABLE 19

TRAINERS' AND PLACEMENT PERSONS' PERSPECTIVE
ON EMPLOYERS' HIRING PRACTICES
BY TYPE OF INSTITUTION

Type of Institution	N^a	Percent of Programs Where Trainers Indicated--			N^b	Percent of Programs Where Placement Persons Indicated--		
		Technical Skills	Work Habits	Both		Technical Skills	Work Habits	Both
Public Secondary	7	14%	71%	14%	4	25%	75%	0%
Public Postsecondary	9	89%	11%	0%	7	43%	14%	43%
Proprietary	13	31%	46%	15%	12	33%	42%	25%
CBOs	8	63%	13%	25%	10	0%	0%	0%
Comprehensive High Schools	3	33%	0%	67%	1	0%	0%	100%

N = Number of occupational programs

N^a = Number of occupational programs where trainer data was reported

N^b = Number of occupational programs where placement person data was reported

TABLE 20

TRAINERS' AND PLACEMENT PERSONS' PERSPECTIVE
ON EMPLOYERS' HIRING PRACTICES
BY CETA-FUNDED AND NON-CETA-FUNDED PROGRAMS

Funding Source	N^a	Percent of Programs Where Trainers Indicated--			N^b	Percent of Programs Where Placement Persons Indicated--		
		Technical Skills	Work Habits	Both		Technical Skills	Work Habits	Both
CETA-funded	11	36%	27%	36%	12	25%	58%	17%
Non-CETA-funded	29	52%	34%	14%	23	22%	48%	30%

N = Number of occupational programs

N^a = Number of occupational programs where trainer data was reported

N^b = Number of occupational programs where placement person data was reported

Placement staff for public secondary institutions seem to agree with the perceptions of their trainer colleagues in emphasizing work habits. Placement staff from public postsecondary institutions hold a different view than trainers at the secondary level. An equal number of placement personnel stress technical skills and a combination of technical skills and work habits.

Trainers in CETA-funded programs equally stress technical skills (36 percent) and both technical skills and work habits (36 percent). But a higher percentage of placement staff (58 percent) think that work habits are most important. Over half of the trainers in non-CETA-funded programs stress technical skills over work habits. However, 48 percent of the placement staff of these institutions choose work habits and 30 percent select both.

Employment/Placement Linkages

The ultimate goal of training is employment. However, the investment an institution makes in activities designed to place persons in jobs may vary with the philosophy of the institution and the place the organization maintains within the overall training delivery system. This section presents a variety of practices through which employers can communicate their hiring needs and practices, and through which graduates can arrange for interviews with employers in the community.

Activities designed to motivate trainees to get jobs and to teach them job-seeking skills are ways that institutions assist trainees to move into employment. This preparation can be integrated into the daily classroom instruction, can be presented as a separate and intense experience, or can be some combination of the two. As presented in table 21, 100 percent of the proprietary schools and CBOs integrate instruction in job search into the occupational coursework. Twenty-five percent of the public secondary and 55 percent of the public postsecondary schools that offer job-seeking training do so as a separate activity headed by a counselor or placement specialist. Whether skills are presented as a separate activity or a part of the classroom activities, resume writing is taught in all but a portion of the public secondary vocational schools. Interview training is the next most common activity. However, fewer schools utilize mock interviewing and videotaped interviewing as an instructional method. Having students contact employers is most commonly practiced by the comprehensive high schools and public postsecondary schools in the sample. In all of the schools where students do contact employers, some combination of personal and telephone contact work is used.

TABLE 21

CLASSES TO MOTIVATE TRAINEES TO GET A JOB
BY TYPE OF INSTITUTION

Type of Institution	N[a]	Percent of Programs Where Activities Are Integrated	N[b]	Percent of Programs that Use Activities of:						
				Resume Writing	Training to Interview	Use Mock Interviews	Use Videotaping	Contacting Employers:		
								Yes	In Person	On Phone
Public Secondary	8	75%	6	83%	100%	83%	33%	50%	83%	33%
Public Postsecondary	11	55%	6	100%	100%	83%	33%	83%	83%	100%
Proprietary	10	100%	10	100%	75%	50%	33%	58%	83%	75%
CBOs	8	100%	6	100%	83%	67%	33%	50%	67%	67%
Comprehensive High Schools	3	33%	3	100%	100%	100%	0%	100%	100%	100%

[a] Forty programs have classes to motivate students to get a job.

[b] For thirty-one programs the activities are integrated into the curriculum.

TABLE 22

CLASSES TO MOTIVATE TRAINEES TO GET A JOB
BY CETA-FUNDED AND NON-CETA-FUNDED PROGRAMS

Funding Source	N[a]	Percent of Programs Where Activities Are Integrated	N[b]	Percent of Programs that Use Activities of:						
				Resume Writing	Training to Interview	Use Mock Interviews	Use Video-taping	Contacting Employers:		
								Yes	In Person	On Phone
CETA-funded	12	75%	8	86%	75%	75%	38%	63%	75%	75%
Non-CETA-funded	28	86%	25	96%	56%	60%	32%	56%	88%	64%

[a] Forty programs have classes to motivate students to get a job.
[b] For thirty-one programs the activities are integrated into the curriculum.

Another way that trainees obtain contact with employers is when employers visit classrooms. Table 23 presents the percentage of the clerical programs that employers visited over the past years, as well as the number of employers who visited each program. Table 24 presents the same information for CETA-funded and non-CETA-funded institutions. In this sample, employer visits are most common in CBOs (86 percent) and comprehensive high schools (100 percent). Ninety-one percent of CETA-funded classes had employer visits, whereas 67 percent of non-CETA classes had employer visits. When asked why employers would visit community or CETA programs, the most common answer was, "to check the place out, see what kind of equipment we have, or see what the classes are like." In all types of institutions, employers often visit to add some realism to the classroom by teaching interviewing, communication skills, or other work-related skills. One value of this form of linkage is in creating a favorable impression of the program with employers. At the same time, program staff have the opportunity to acquire information about changes in the job market.

TABLE 23

EMPLOYERS' VISITS TO TRAINING CLASSES DURING LAST YEAR
BY TYPE OF INSTITUTION

Type of Institution	N	Percent of Programs Where Employers Visit Training Class	Of the Programs Where Employers Visit, the Number of Employers Who Visit	
			Range	Median
Public Secondary	5	60%	7-15	9
Public Postsecondary	5	60%	2- 6	4
Proprietary	12	67%	1-25	9.5
CBOs	7	86%	2-25	3.5
Comprehensive High Schools	3	100%	1- 5	3.5

N = Number of occupational programs

TABLE 24

EMPLOYERS' VISITS TO TRAINING CLASSES DURING LAST YEAR
BY CETA-FUNDED AND NON-CETA-FUNDED PROGRAMS

Funding Source	N	Percent of Programs Where Employers Visit Training Class	Of the Programs Where Employers Visit, the Number of Employers Who Visit	
			Range	Median
CETA-funded	11	91%	2-52	7.5
Non-CETA-funded	24	67%	1-25	6.5

N = Number of occupational programs

Another means of learning about employer expectations and how well a training program enables graduates to meet those expectations is through training staff visits to graduates on the job. Table 25 shows the percent of programs in which the trainers visit graduates as well as the percent of programs in which placement staff visit graduates. Placement staff form the predominant link to graduates on the job for CBOs (70 percent), for public secondary institutions (60 percent), and for comprehensive high schools (100 percent). In contrast, 62 percent of the trainers in public postsecondary schools visit former students on the job.

TABLE 25

INSTRUCTOR AND PLACEMENT PERSON CONTACT WITH GRADUATES
BY TYPE OF INSTITUTION

Type of Institution	N	Percent of Programs Where Trainers Visit Graduates	Percent of Programs Where Placement Staff Visit Graduates
Public Secondary	5	20%	60%
Public Postsecondary	9	62%	33%
Proprietary	13	31%	38%
CBOs	10	20%	70%
Comprehensive High Schools	3	33%	100%

N = Number of occupational programs

Through on-site interviewing, project staff acquired some insight into what may seem to be duplication, where both trainers and placement staff visit employers. The first observation is that in most programs, the instructor plays a major placement function. Secondly, each of these persons visits with a somewhat different purpose. Instructors visit to assess the state of the art of the workplace in order to keep instruction up to date. Placement personnel visit to make sure the employer is satisfied, and in that way verify what matching process is used for putting graduates into jobs.

Table 26 presents the percent of programs, grouped by CETA-funded and non-CETA-funded, taught by trainers who visit employers, as well as the ideas for instruction that resulted from those visits. The table also displays the same information for placement personnel.

TABLE 26

INSTRUCTOR AND PLACEMENT PERSON CONTACT WITH EMPLOYERS
BY CETA-FUNDED AND NON-CETA FUNDED PROGRAMS

Funding Source	N	Percent of Programs Where Trainers Visit Employers	Ideas That Resulted	Percent of Programs Where Placement Persons Visit Graduates/Employers	Ideas That Resulted
CETA-funded	12	33%	-more emphasis on typing -teach phone techniques -teach word processing	83%	-need CRT operators course -emphasize job skills -sharper screening
Non-CETA-funded	28	36%	-stress attendance -add word processing -add post-graduates to advisory board	43%	-improve attendance

N = Number of occupational programs

In both the CETA-funded and non-CETA-funded programs, approximately one-third of the instructors visit employers. However, 83 percent of CETA-funded placement personnel--as compared to 43 percent of non-CETA placement personnel--visit employers. Interestingly, instructors from CETA-funded programs determine from these visits whether their programs need greater emphasis on the technical skills. Instructors from non-CETA programs observe whether there is the need to stress attendance as part of instruction. Differences in perceived need may result from the great emphasis given attendance and related work habits in CETA programs and the longer training time found in many non-CETA programs. CETA graduates may therefore receive specific instruction in work habits but may have less time to develop technical competence. Depending on the orientation of the instructor, a non-CETA student may not study in an environment in which there are penalties for absenteeism, tardiness, or improper dress.

Correlation between Indicators of Linkage and Program Characteristics

This section reports on the hypothesis that training programs run by institutions or taught by staff that are in close communication with local private employers are different from training programs that are less closely linked to local employers. This hypothesis was tested by constructing a linkage score at both the institutional level and program level, and then correlating these scores with various characteristics of the program.

The linkage score assigned to the institution represents a composite of: (1) the number of hours spent talking to employers; (2) whether the institution has an advisory committee, subcommittees, and occupational committees; (3) the number of hours per month devoted to advisory committee meetings; (4) the percentage of the advisory committees that are employers; and (5) whether the executive director has related prior private sector work experience. Some of the institutions (the PICs and the CETA prime sponsors)

studied do not run training programs themselves; they contract with vendors--schools, colleges, and CBOs--to provide the training. Consequently, the sample of institutions were divided into two categories: funding agencies and vendors.

Program linkage scores consist of values that reflect: (1) whether the trainer, placement person, and intake person each has prior private sector experience; (2) whether employers visit the training program; (3) whether the instructors visit graduates on the job; and (4) whether the placement persons visit graduates on the job.

Table 27 presents the correlation among the linkage scores for the funding agency, the vendor, and the program linkage scores. The significant positive correlation between the linkage indexes for the funding agency and vendor suggests that highly linked PICs and prime sponsors select as vendors institutions that are also linked with employers. That there is no relationship between linkage occurring at an institutional level and at the program level indicates that these levels may function independently. Therefore, extensive institutional work with advisory committees may not necessarily affect the way a program links with employers. Similarly, a classroom training program may be closely aligned with community employers and function within an institution that has little formal or informal relationship with employers.

TABLE 27

CORRELATION OF FUNDING AGENCY PROGRAM LINKAGE SCORES

	Funding Agency Linkage	Vendor Linkage	Program Linkage
Vendor Linkage	0.58 0.07 10		
Program Linkage	0.12 0.69 14	0.14 0.39 40	
Worksite Experience	0.24 0.41 14	0.06 0.72 37	0.17 .30 41

The first number in any cell is the correlation coefficient, and the second is the probability. This correlation is not different from zero. The third number is the number of observations upon which the correlations are based.

The linkage survey asked several questions about specific ways in which employers contribute to training programs. Table 28 shows the correlations of linkage at the institutional level (vendor linkage) and linkage at the program level, as well as five rather common ways in which employers influence the content and process of what is being taught. Overall, there appears to be no correlation of vendor or program linkage and the specific contributions used in the interview. Two exceptions are the significant positive correlations between vendor linkage and the donation of hardware ($r = .35$), and between program linkage and the provision of training materials.

TABLE 28

CORRELATION OF INSTITUTIONAL AND PROGRAM LINKAGE TO VARIOUS EMPLOYER CONTRIBUTIONS TO THE TRAINING PROGRAM

	Vendor Linkage	Program Linkage
Participation in Curriculum Design	- 0.26 0.13 34	0.08 0.63 38
Donate Hardware	0.35 0.07 28	0.26 0.15 32
Provide Training Materials	- 0.10 0.62 28	0.33 0.06 32
Recommend Occupational Curriculum	0.13 0.52 27	0.06 .75 31
Recommend Firm-specific Curriculum	0.12 0.54 27	0.25 0.17 31

Buying equipment is a responsibility of the institution, not of program personnel. It would seem that executive directors who are well linked with the private sector use their connections to get free equipment, but that their contacts have very little to do with the content of the curriculum.

Activities designed to teach and motivate trainees to get jobs are an important part of many training programs. Table 29 shows correlations between linkages both at the institutional and at the program level and four practices used in job search.

TABLE 29

CORRELATION OF VENDOR AND PROGRAM LINKAGE TO METHODS USED TO PREPARE TRAINEES FOR SEEKING AND RETAINING JOBS

	Vendor Linkage	Program Linkage
Mock Interviews	0.01 0.95 32	0.36 0.04 33
Videotape	0.40 0.02 32	0.25 0.16 33
Contact Employers	- 0.12 0.50 32	0.50 0.00 33
Drop for Absenteeism	0.02 0.92 35	0.44 0.01 38

Since one machine can be shared by a variety of training programs, the decision to purchase a videotape machine is typically made by the institution's executive director, not by the teachers of individual occupational specialities. As a result, the use of videotapes is significantly positively correlated (r = .40) with vendor linkage. The other aspects of job search training are more under the control of program staff. This probably explains why program linkage is significantly correlated with the using mock interviews, having trainees contact employers, and dropping trainees for absenteeism.

Significant components of a training program are the admissions process and criteria. How applicants are assessed and how rigidly schools adhere to screening criteria determine what proficiencies an applicant must demonstrate and therefore what groups of persons (i.e., high school dropouts and so forth) may be eligible. It is important to know, therefore, how linkages with employers influence screening criteria (and hence determine who has access to training), and how much time is required to bring an individual up to a desired level of performance.

Table 30 presents the correlations of vendor linkage and program linkage to the use of standardized tests, customized tests, and interviewing for ranking applicants in the selection process. This data suggests that the more tightly linked the school is to employers, the less likely the school is to use standardized tests and the more likely it is to use interview as a selection device. Since selection and assignment of students is an institutional function, it is not surprising that it is linkage at this institutional level that seems to have an impact on how training institutions screen applicants for training.

TABLE 30

CORRELATION OF VENDOR AND PROGRAM LINKAGE
TO ADMISSIONS CRITERIA

	Vendor Linkage	Program Linkage
Standardized Tests	- 0.35 0.09 25	0.01 0.96 29
Custom Tests	- 0.11 0.59 25	0.10 0.60 29
Interview to Rate Applicant	0.41 0.04 25	0.20 0.30 29

The effect of employer involvement in the design and evaluation of training programs and the nature of job search training is examined in table 31. There is a significant positive correlation between employers making general curricular recommendations and the program practice of teaching resume writing and of conducting mock interviews. There is a similar correlation between employer evaluation of programs and the teaching of resume writing and conducting of mock interviews.

TABLE 31

CORRELATION OF EMPLOYER PARTICIPATION IN CURRICULUM PLANNING AND PROGRAM JOB SEARCH PRACTICES

	Recommend Occupational Curriculum	Recommend Firm-specific Curriculum	Evaluate Programs
Resume Writing	0.45 0.09 15	0.27 0.33 15	0.47 0.08 15
Train to Interview	0.21 0.46 15	0.08 0.78 15	0.37 0.18 15
Mock Interview	0.45 0.09 15	0.27 0.33 15	0.47 0.08 15

Continuing employer complaints that workers cannot read and compute adequately to perform productively, and the increasing frustration of instructors over poor literacy skills, make literacy a major issue in the employability of youth. Table 32 shows correlations between the practice of teaching reading and math as part of coursework and various indicators of linkage and employer participation in the design of a training program.

TABLE 32

CORRELATION OF LINKAGE AND INCLUDING BASIC SKILLS INSTRUCTION IN THE CURRICULUM

			Employer Participation		
	Vendor Linkage	Program Linkage	Recommend Occupational Curriculum	Recommend Firm-specific Curriculum	Evaluate Programs
Include Instruction In Reading and Math	0.28 0.09 38	0.20 0.20 42	0.45 0.01 31	0.28 0.13 31	0.38 0.04 31

A pattern similar to the one noted for job search training appears for basic skills instruction. Generalized employer involvement in occupational curriculum planning as well as with program evaluation is significantly correlated with basic skills instruction. There is also a positive and significant ($p < .10$) correlation between vendor linkage and basic skills instruction. There is a positive correlation between employer involvement in firm-specific curriculum and instruction in basic skills, but it is not statistically significant.

CHAPTER IV

EMPLOYER INTERVIEWS

Linkage has been discussed as it is viewed by professional staff of institutions that have as a part of their mission preparing persons for employment. This chapter presents responses from forty employers to interview questions that parallel those asked in the institutional interviews. In addition, data obtained from employers who are not a part of the original sample, but who are interested in establishing linkages with training institutions, are included.

Interviews of Advisory Committee Members

As part of the institutional surveys, institutional staff members were asked to identify members of the schools' advisory committees as well as the occupational programs. The original plan was that these persons would then be interviewed. Most respondents, however, were very hesitant to provide these names and requested that a letter be sent to the schools indicating the purpose of the interview; schools would then recommend employers.

This procedure was followed, with the addition of sending letters to employers themselves prior to the interview. A total of forty interviews were conducted. Table 33 shows the characteristics of the advisory committee members sample by type of institution advised, type of advisor's company and size of company. This is a biased sample in that it includes persons whom school staff see as cooperative, approachable, and perhaps supportive of their institution.

TABLE 33

DESCRIPTION OF SAMPLE EMPLOYER SURVEY

Type of Industry	Number	Size of Company	Number	Institutional Relationship	Number
Public Agencies	3	1-100	9	Prime Sponsor	3
Manufacturing	17	101-1000	5	PIC	7
Banking, Insurance, Sales	12	1001-5000	13	Postsecondary	12
Public Utilities	8	over 5000	12	Secondary Voc-Ed	10
Chemical and Oil				CBO	3
				Proprietary	2
				Comprehensive High School	3
TOTAL	40		40		40

Another aspect of the data that should be kept in mind is that the employers interviewed may currently serve or have had previous experience with a variety of training institutions. Research staff members found that while individuals had been recommended because of their association with an institution in the linkage sample, many employers answered questions from the perspective of overall experience of working with schools in general.

Interview Protocol

A telephone interview lasting approximately twenty minutes was the method used to obtain employer data. (The interview protocol appears as in the separate document in the Technical Appendices.) The interview was structured with three purposes in mind. The first was to determine what employers perceive as the nature of their primary involvement with training institutions, and in what ways that involvement occurs. Open-ended questions were used to elicit this response. Second, employers were specifically asked whether they participate in the specific admissions, curriculum development, and placement activities enumerated in the institutional survey. This information provides an employers' enumeration of these activities. Third, employers were asked to describe ways in which they believe linkages with training institutions can be improved and in what aspect of the training program their involvement is most critical.

Table 33 shows the distribution of employers by type of industry, size of company, and type of institution with which they are associated. As shown in this table, the majority of the employers in the sample are from manufacturing industries, followed by a cluster entitled banking, insurance, and sales. The last three are grouped together because they represent interaction with the public, and high concentration of clerical skills. Approximately one-third of the total sample is companies with between one thousand and five thousand employees, and one-third is companies with over five thousand employees. It would appear that from this sample, larger corporations are better able to provide staff for advisory committees or are more visible in the community and, therefore, are thought of and requested more often. However, since there are nine employers from companies of less than one hundred employees, it is clear that smaller businesses are also involved with training institutions. The following pages present employer answers to the questions asked about how employers link to schools, and about the relative importance given different practices in training decisions relating to institutional planning, training, and employment/placement. Even though an effective training program is assumed to be the product of coordination of institutional policies, course development, delivery, and placement, most employers talk about training in terms of classroom occupational instruction. The dichotomization appears to have little meaning for many employers who talk in terms of occupational competencies and methods of training.

Data

Table 34 shows the total responses to the question of how difficult it is to find reliable skilled workers at reasonable wages and how important

vocational training is for hiring decisions. About one-third of the employers have difficulty finding workers, one-third fall in the middle, and a little less than a third seem to have no difficulty finding workers. Twenty-four of forty employers (60 percent) view vocational education as important in their hiring decisions.

TABLE 34

PERSPECTIVE ON HIRING SKILLED WORKERS

Difficult to Find Workers		Importance of Vocational Training	
Very difficult	7	Important	24
Somewhat difficult	9	Important, but not required	13
Not easy	15	Not important	3
Easy	7		
Don't know	2		

Several characteristics of institutions and program policy have implications for what training can be done, and must be done, in the classroom in order to prepare trainees to be competent on the job. It might be expected that effective linkages between employers and training institutions would be comprehensive--and would systematically contribute to decisions about appropriate admission requirements, practices, support services, instructional methods, and finally, placement. Interviews with institutional personnel, however, gave the distinct impression that employers are not involved in this comprehensive manner with training institutions. Rather, different employers are called upon to provide advice on the selection of occupations for training, on curriculum, and on placement. Certainly individuals with different capacities within business and industry may need to be closely involved with each of these functional areas. However, this disjointed approach may weaken employer contributions to the overall policy directives within which programs must operate.

Tables 35 through 38 display the percentages of employers interviewed who indicated that their companies did participate in a specific linkage function (i.e., institutional planning, training, or placement/employment), and in what ways. The responses are also grouped by categories of industry: manufacturing; banking, insurance and sales; public utilities, chemical and petroleum; and public agencies. These groups were created by reviewing the industries represented and clustering them by similarity in type of work performed. In the total sample there were seventeen manufacturing companies; thirteen banking, insurance, or sales; eight public utilities, chemical, or petroleum and three public agencies.

Institutional Planning

The first function employers commented on was institutional planning or pretraining planning. This function includes establishing criteria for selecting personnel, establishing criteria for admissions and selecting

students, and determining program offerings. The decisions made in this area have implications for the type of training possible, ultimate competency levels, and overall training environment of the students.

Institutional, Pre-training Planning

Table 35 shows the percentage of employers who do contribute to decisions of an institutional, pre-training nature, what their primary form of involvement is, and what means are used to communicate employer opinions.

TABLE 35

PERCENT OF EMPLOYERS PARTICIPATING IN INSTITUTIONAL PLANNING/PRETRAINING ACTIVITIES

	Type of Industry				
Primary Involvement	Manufacturing (n = 17)	Banking, Insurance, Sales (n = 12)	Public Utilities, Chemical, Petrol. (n = 8)	Public Agencies (n = 3)	Total (n = 40)
Criteria for hiring personnel	6%	8%			5%
Criteria for selecting students	18%	17%	25%	33%	20%
Screening of personnel	6%	25%			13%
Screening of student applications	12%	8%			8%
Exchange of professional staff	6%	17%			8%
Determination of program offerings	41%	42%	25%	33%	38%
Other	18%	25%	25%		8%
Form of Involvement					
Advisory committee	59%	50%	38%	33%	50%
Personal relationship	6%	17%			2%
Formal agreements			13%		2%
Professional meetings					0%
Other	18%	17%	17%		13%

Across all types of industries, advising on program offerings is the most often used means of participating in institutional planning. A small percentage of all types of employers suggest criteria for selecting students. Employers from manufacturing and from banking, insurance, and sales appear to be involved in a broader range of activities than employers from the public utility, chemical, and petroleum, or the public agency categories. Advisory committees are the most commonly used means of communicating information. Other forms mentioned several times are making executive loans and having industry persons instruct classes held in training institutions.

Table 36 shows what percent of employers indicated that their company is involved in the specific activities listed.

TABLE 36

PERCENT OF EMPLOYERS INDICATING INVOLVEMENT IN SELECTED PLANNING ACTIVITIES

	Percent Answering Yes				
	Manufacturing (n = 17)	Banking, Insurance, Sales (n = 12)	Public Utilities, Chemical, Petrol. (n = 8)	Public Agencies (n = 3)	Total (n =40)
Suggest criteria for hiring personnel for training institutions	41%	58%	13%		38%
Suggest criteria to selecting students for training	47%	58%	50%	33%	50%
Assist in interviewing or otherwise screening school personnel	18%	17%	13%		15%
Assist in interviewing or otherwise screening applicants for training	41%	25%	13%		15%
Hold exchange programs for professional staff					
Determine occupations for training	29%	42%	50%		35%

Forty-one percent of employers from manufacturing and 58 percent from banking, insurance, and sales advise institutions regarding criteria for hiring training personnel. Similarly, 47 percent of manufacturers and 58 percent of bankers et al. make recommendations on criteria for selecting trainees. Changes in equipment and skills required in those industries would seem to require personnel and trainees who have somewhat different or additional competencies than previously necessary. Hence, there is industry involvement in establishing selection criteria. Fifty percent of the employers from the public utilities, chemical, and petroleum industries recommend criteria for selecting trainees. Their involvement may also reflect the importance of communicating changes needed in personnel within the industry. Fifty percent of the employers from public utilities, chemical, and petroleum industries also participate in determining occupational areas for training. This involvement may reflect new and emerging occupations within these industries and the need to communicate them to schools.

Training

The second major planning area is occupational training itself. This involves determining the specific skills to be taught, how they can best be

taught, and what standards will be applied to assess competence. Table 37 shows the primary contribution employers make to the training curriculum. Fifty percent of all employers recommend curriculum to meet company standards and 40 percent donate hardware. Advisory boards dominate as the major means of communication.

TABLE 37

PRIMARY FORM OF EMPLOYER PARTICIPATION IN CURRICULUM PLANNING

Primary Involvement	Type of Industry				
	Manufacturing (n = 17)	Banking, Insurance, Sales (n = 12)	Public Utilities, Chemical, Petrol. (n = 8)	Public Agencies (n = 3)	Total (n = 40)
Donate hardware	35%	17%	100%		40%
Donate training materials	41%	17%	38%		30%
Recommend curriculum for licensing	35%	17%	13%	33%	25%
Evaluate curriculum	47%	42%	13%		35%
Recommend curriculum to meet company standards	59%	15%	50%		50%
Other					
Form of Involvement					
Advisory committee	76%	47%	63%		55%
Personal relationship	18%	17%	38%		23%
Formal agreements	6%	8%	13%	33%	8%
Professional meetings	6%	8%	13%		8%
Other	29%	8%	13%	33%	13%

In addition to the primary commitment to the training curriculum, 60 percent of the manufacturing industries and 30 percent of the banking and insurance sales and the public utilities, chemical, and petroleum industries recommend curriculum changes needed to increase the likelihood that graduates will be hired by their companies. A much smaller percentage of manufacturing employees (29 percent) actually evaluate the training curriculum. Curriculum as used in this study encompasses all materials, equipment, procedures and enviroments that have implications for the training.

Placement/Employment

One test of the effectiveness of employer linkages to training occurs when trainees seek employment. The linkage study shows that the placement/employment function is yet another related--but often separate--area where employers participate in the delivery of training support services.

The individuals and the companies that become involved at this point are often different from those involved at the institutional level and at the program level. Exceptions to this pattern occur where employers have a commitment to hire graduates from a training program. Where this commitment is present, an employer is more likely to be involved in all three functional areas.

Table 38 indicates how employers communicate their employment needs to training institutions. With the exception of public agencies, only about half of the employers notify schools of openings. This suggests that many employers use other sources to obtain workers. It also indicates that schools must initiate contact and identify job openings if their graduates are to compete successfully. Advisory committees are again the most commonly used means of communicating employment needs. Personal relationships among staff across institutions are also an often used means of communication.

TABLE 38

PRIMARY INVOLVEMENT OF EMPLOYERS IN PLACEMENT/EMPLOYMENT ACTIVITIES

Primary Involvement	Type of Industry				
	Manufacturing (n = 17)	Banking, Insurance, Sales (n = 12)	Public Utilities, Chemical, Petrol. (n = 8)	Public Agencies (n = 3)	Total (n = 40)
Notify school of opening	65%	42%	50%	100%	58%
Send job orders	29%	8%	38%	0%	23%
Teach interviewing techniques	29%	25%	25%	33%	65%
Other	0%	8%	0%		6%
Form of Involvement					
Advisory committee	53%	29%	38%	0%	43%
Personal relationship	35%	12%	25%	33%	23%
Formal agreements	6%	0%	13%	0%	5%
Professional meetings	6%	0%	13%	0%	5%
Other	6%	0%	13%	0%	5%

Improving Linkage

In addition to questions regarding patterns of linkage with training institutions, the employer survey included three items that solicited the employer's opinion regarding--

1. what their firm could do to improve its working relationship with training institutions;

2. which of the three functional areas (pre-training planning, training, and employment/placement) they consider most important for improving the employment prospects of hard-to-employ youths;

3. importance of technical skills versus work attitudes in hiring decisions.

There was a wide range of responses to the question of how respondents' firms can improve the way they work with training institutions. Placing more staff on advisory committees was the most prevalent category of response. Many of the interviewees were personnel officers and think that production supervisors and top-level managers will also benefit by serving on advisory committees. The second most frequent response was to give suggestions about communication methods apart from advisory committees. Suggestions included mutual tours, exchanges of staff, and inservice training for teachers about business and industry processes. Wider use of cooperative education programs was also suggested. Several interviewees pointed out barriers in working with training institutions. Some of these included lack of time, lack of budget, and lack of awareness on the part of some managers of how working with training institutions could benefit the company.

Thirty-five respondents answered the question about the importance of the three functional areas. Nineteen feel that pretraining planning is most critical, and sixteen believe training is most critical. No respondents are of the opinion that employment/placement is the most critical functional area. Those feeling that pretraining planning is most important generally explained their choice by pointing out that students are not always matched with programs in the best manner, and that a school's array of program offerings determines how fruitful it might be for any given firm to work with that institution. Employers who believe training is most critical feel that curriculum and actual skills determine employability.

Of twenty-nine respondents, sixteen think that work attitudes are more important than technical skills in the hiring decision for a young applicant. Reasons for this choice are generally variations on the idea that skills can be taught on the job while attitudes determine the long-range worth of an employee. Only three respondents think that technical skills are more important, and all three are involved with hiring for more technical occupations. The remaining ten employers say that they consider attitudes and technical skills equally in all hiring decisions.

Linkage as Viewed by Postsecondary Schools and Employers

Much has been said about the fact that there should be close coordination and cooperation between the school system and the business sector in a community. Patterns of linkage have been discussed extensively and the relationship of linkage practices to aspects of programs and policy have been

identified. Educators and businessmen are continually urged to establish working relationships and to cooperate in establishing and reviewing training needs and programs. Very little has been said, however, about the results of such coordinating efforts on the programs and businesses involved.

To secure some insight into what outcomes might be anticipated from conscious coordination, a number of educators and business people were asked to respond to a questionnaire designed by the National Center for Research in Vocational Education. The respondents were attending a conference on Industry-Education Linkage sponsored by Lewis and Clark College, Lewiston, Idaho, and by the American Society for Training and Development, Spokane, Washington Chapter. Educators were asked the following:

1. What would be the major outcome achieved by an effective linkage with business and industry?

2. What would be different about your vocational education program as a result of a successful linkage with business and industry?

Table 39 presents the percent of respondents who gave an answer that could be clustered into the listed categories.

TABLE 39

ANTICIPATED OUTCOMES OF LINKAGE BETWEEN EMPLOYERS AND VOCATIONAL EDUCATION

EDUCATION RESPONSE (n = 52)	
1. Major Outcomes	Percent Responding
a. Improved training and education	57%
b. Increased relevance to industry needs	50%
c. Increased credibility, communication, and understanding	28%
d. Increased interest and support for schools	26%
e. Most cost-effective training	24%
f. Increased numbers trained	23%
2. Changes In Training	
a. Improved placement	24%
b. Improved information to students	19%
c. Sharing instructors and resources	13%
BUSINESS/INDUSTRY RESPONSE (n = 9)	
1. Major Outcomes	Percent Responding
a. Reduced training cost	77%
b. Better trained employees	66%
c. Planned training and placement system	44%
2. Changes In Training	
a. Concentrate on updating and specific problems	55%
b. Reduce or eliminate company training	44%

Business people were asked these questions:

1. What would be the major outcome achieved by an effective linkage with vocational education?

2. What would be different about your method of training as a result of a successful linkage with vocational education?

While it appears that educators and business people may have some different expectations of linkages with each other, there seems to be a mutual belief that cooperation will produce a better trained worker in a more efficient and effective way.

CHAPTER V

FUTURE DIRECTIONS

Powerful social and economic forces are not at work that promise to change the relationships between the private employment sector and our nation's educational institutions. There is a definite need for local commitment by both the employment community and the educational establishment to the long-term training needs of our total population. Increased linkage and collaboration between the private employment sector and educational institutions should contribute to reduced training costs and better preparation of young people for work.

Research conducted at the National Center for Research in Vocational Education indicates that the 1980s will be characterized by high rates of technological change and high levels of investment in capital equipment. Coupled with these developments will be lower levels of public expenditure and increased competition for public dollars. Those involved in delivering vocational education and job training are likely to find themselves trying to keep pace with rapid changes in technology and equipment with fewer dollars to do so. These technological and economic conditions seem likely to produce strong pressures for increased use of skill preparation programs by employers.

Noting that the social impact of the technological revolution on the American workplace in the next decades is expected to be dramatic, the Joint Economic Committee of the U.S. Congress (1980) concludes that "the jobs created will require a great degree of technical skill . . . and training and education programs which are more carefully coordinated with market developments will be needed" (p. 36). The Committee further concludes that technological and social changes:

> . . . suggest the need for continued examination of the relationship between work and education. . . . New links must be forged between education institutions, training programs, and private employers. The future employment market will require not only competency in the basic skills, but also attention to increasingly complex job-related skills that enable employers to adapt to changing technology, employment patterns, and job opportunities. (p. 26-27)

An overriding, common concern of business and education is that an adedequate number of trained people be available to serve the needs of our economy (Striner 1982). To meet our growing needs for a more highly skilled labor force, greater linkage and collaboration are needed between the private sector and the educational system. Unfortunately, past efforts to bring schools and employers into better alignment "have often been conducted on a fragmented, duplicative, and uncoordinated basis" (Clark 1982).

Research on linkage conducted at the National Center reported in this document has uncovered some interesting relationships and useful conclusions. Linkage occurs at two levels: (1) the institution level, and (2) the program

or classroom level. Indicators of linkage at the institutional level include the background of the executive directors, the time they spend talking with local employers, and the involvement of the advisory committee in the organization. Indicators of training program linkage include the background of the classroom teachers and the time they spend talking to employers. The research uncovered a number of other findings as well:

- CETA organizations that have strong linkage with employers tend to fund training programs at institutions with strong linkage.

- Institutional-level linkage is associated with (1) being selective about who is admitted into the program, (2) the inclusion of basic skills instruction in the training curriculum, (3) a greater tendency to start new programs at the suggestion of local employers, (4) a greater tendency to cancel programs due to lack of demand.

Almost no association was found between institutional linkage and program linkage, or between institutional linkage and other characteristics of the training program. There is, however, a tendency for programs with strong linkage to be more likely to--

- have business-donated equipment and training materials;

- have designed the curriculum in response to recommendations of local business people;

- have developed a curriculum that is specific to the needs of a particular employer;

- provide job search training that includes mock interviews and actual practice at contacting employers; and

- discipline students for rule infraction such as absenteeism.

In summary, the study demonstrated that linkage at the institution level influences the decisions made at that level (e.g., identification of vendors with whom to contract, of programs to offer, and of admissions criteria to use), but that linkage at the institutional level has very little influence on linkage at the training program level or on the specifics of how the training is provided.

These relationships do not immediately suggest a theoretical framework for answering important questions related to linkage, however. Answers are still needed to to questions such as the following:

- What are the costs of linkage?

- How does linkage benefit employers?

- How does linkage benefit high-risk youth?
- What are the circumstances under which linkage produces the most and least benefits?
- How can costs of linkage be minimized?

A general optimizing model is needed that will supply answers to these and other persistent questions. Such a model should incorporate such factors as degree of specificity of training and cost of equipment required in the training. These factors should influence the level of linkage that is needed, and its cost.

Additionally, the meaning of the concept of linkage needs to be clarified and measurements to be specified. The ongoing process of collecting data regarding linkage emphasizes the need for this conceptual analysis. An optimizing model will refine and expand the framework for conceptually structuring linkage as a phenomenon, and will serve to strengthen the basis for designing and conducting targeted studies of the linkage process and its outcomes.

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